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Cotton in Spain Trends and Prospects

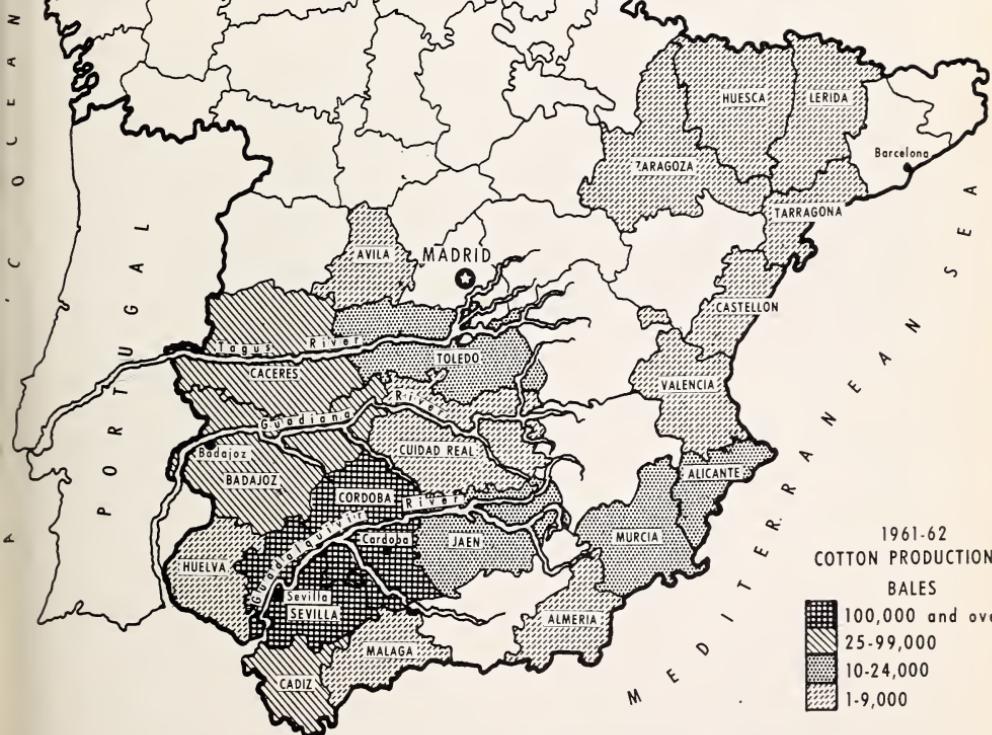
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SPAIN

C O U N T R Y
P O R T U G A L

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NOTE: Canary and Balearic Islands not shown. Boundaries are not necessarily those recognized by the U. S. Government.

PREFACE

Spain has moved with considerable speed during the past decade into a new, more prosperous era. Industrial progress has recently been in the limelight, but agriculture is still an important segment of the economy. Over two-fifths of the nation's more than 30 million people are engaged in agriculture, despite a rapid shift to urban employment in the past decade.

Spain covers about 197,000 square miles, an area about one-fourth larger than California. Precipitation is uncertain from year to year and not well distributed within the year. A little over 40 percent of Spain's area is arable (including orchards, vineyards, and fallow). Normally, more than one-third of total arable land is devoted to grain, while about one-fifth is in olive groves and vineyards. Grains, potatoes, fruits, and dairy products are important in the northern coastal belt, while the central plateau is the chief wheat-producing region of Spain. Cotton has come into prominence in the Andalucia and Extremadura regions in recent years and now vies with olives, grains, oranges, grapes, and vegetables for use of resources.

Farming methods in Spain are generally considered below Western European standards, though there is an increasing number of modern, highly efficient production units. Much of the cereal crop is still reaped and threshed by hand. The scarcity of tractors and equipment can be attributed partly to the fragmentation of many farms and partly to the rugged topography of the land, and to the lack of capital or resistance of some farmers to new methods. A limited number of tractors and an expanding volume of other kinds of farm machinery are now being built in Spain. There has also been a decline in work animals in recent years.

Moves are being made to improve Spain's agricultural output and efficiency. Perhaps the most noteworthy features are the large irrigation and resettlement projects being carried out in various parts of the country. When complete, these projects will have reclaimed over $2\frac{1}{2}$ million acres and resettled three-fourths of a million persons. Other projects deal with

reforestation, watershed improvement, and expanding extension services. In addition to projects being operated by government agencies, the government offers agriculture encouragement through subsidies granted for land consolidation, storage facilities, farm buildings, processing facilities, and electrification. In early 1964, Spain launched a 4-year development plan to spur economic growth. Of the program's total cost of \$5.6 billion, agriculture will receive \$321 million. In addition, \$815 million is earmarked for irrigation, from which agriculture will obviously benefit.

ACKNOWLEDGMENTS

Numerous officials and persons in various segments of the cotton industry of Spain gave generously of their time and knowledge in providing information on cotton and its place in the economy of the country. Also representatives of the U.S. Government, especially the U.S. Agricultural Attaché in Spain and his staff, provided invaluable assistance in connection with the first-hand survey and offered helpful suggestions with regard to the appraisal of the rapidly changing cotton situation in Spain as well as the prospects for the future.

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Cotton in Spain

Trends and Prospects

By Joseph H. Stevenson
Vernon L. Harness

SUMMARY AND CONCLUSIONS

The cotton industry in Spain, along with the entire economy, has undergone striking advances in the past decade, and further advances seem to be in store for the next several years. Raw cotton consumption, now running at about 550,000 bales¹ per year, has increased sharply since the early 1950's. To meet more of these consumption needs and thereby reduce raw cotton imports, support prices for domestically produced cotton have been kept at relatively high levels. In response, production leaped from an average of around 60,000 bales in the 1950-54 period to over 500,000 bales in 1962-63.

This closing of the consumption-production gap has been reflected in a deep cut in overall raw cotton imports, which averaged over 300,000 bales annually for half a century. Spain has nevertheless still been a net importer of raw cotton in most recent years, though the phenomenal success in increasing cotton acreage and yields has trimmed import needs sharply.

A number of factors point to a moderate upward trend in Spain's cotton production over the next several years. Farmers seem to be well satisfied with cotton as a cash crop. Additional irrigation appears certain, and cotton will be considered for a part of this acreage. Higher yields can be expected as more acreage is irrigated, additional fertilizer and insecticides are

¹ In this report, bales of cotton are 480 pounds net weight unless otherwise specified.

used, better adapted seed is planted, and farmers practice more efficient cultural methods. Spain will probably continue to produce large cotton crops unless there is a substantial reduction in the present relatively high support price, and this does not appear imminent. However, further increases in production in the next few years will be more likely to come from higher yields than from significantly larger acreage.

The spread between cotton consumption and production will probably narrow further, but not close completely, in the next few years. However, the future rate of increase in consumption and production may be slower than the rapid rise of recent years. Prospects for further consumption increases hinge largely on population growth in combination with improvement in real incomes of consumers, the cotton promotion program, increasing efficiency of the textile industry, and the ability of Spain's textile products to compete in world markets.

A part of Spain's sharp increase in cotton consumption in the past several years stems from the well-organized market development program jointly sponsored by USDA's Foreign Agricultural Service, the Cotton Council International, and Spain's Servicio Comercial de la Industria Textil Algodonera. These agencies are continuing to promote greater consumption of cotton textiles through a balanced program of market research, public relations, and sales promotion. The success of these and other programs is evident in the increase in per capita consumption of cotton from less than 6 pounds in 1955 to over 7 pounds in 1960.

A plan is underway for the reorganization and modernization of the Spanish cotton textile industry to enable the industry to compete more effectively in international textile trade as well as to provide the domestic textile market with quality, lower priced goods. Industry and government leaders have been working on difficult problems such as financing and labor displacement. The plan is being put into operation gradually, and despite the difficult readjustments involved, the industry situation should improve as the average unit size of mills is expanded, modern equipment replaces old, and labor efficiency is increased.

In the future, Spain's imports of raw cotton will probably be smaller than those of past years. However, there will be a need for types and qualities not available from domestic production, and increased imports whenever the local crop is short. The U.S. cotton industry can reasonably expect to fill a substantial part of these needs, provided prices are competitive. Sales for dollars should be possible as Spain's economy continues to improve.

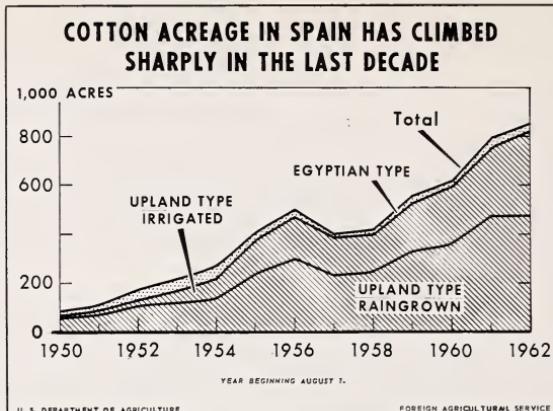
It appears likely that from time to time Spain will export small quantities of raw cotton of qualities in excess supply. The shipments were first made in 1961-62, and continued in the following season. Spain's exports of cotton textiles have risen substantially in the past few years, partly as a result of various official encouragements. Continued large exports of cotton textiles hinge on such factors as national consumption trends and Spain's ability to compete effectively in the world's textile import markets.

THE RAW COTTON INDUSTRY

Acreage and production

The history of cotton production in Spain is in striking contrast to the centuries-long record of cotton production in volume in some of the more traditional cotton growing countries of the world. In Spain, cotton output has increased sharply in the past 2 decades. Production in 1962-63 totaled over 500,000 bales, compared with only 74,000 just 10 years earlier and less than 5,000 bales annually in the early 1920's.

In the 1940's, cotton acreage and production began a slow, rather irregular increase. For example, acreage seesawed from 115,000 acres in 1944-45, down to 60,000 acres in 1945-46, up to 126,000 in 1946-47, down to 69,000 in 1947-48, up to 124,000 in 1948-49, and so on. Similarly, yields per acre varied widely from an average of 64 pounds in 1945-46 to 116 in 1948-49; the changes reflect substantial differences in growing conditions in the various seasons.



Spain began to increase cotton production in the early 1950's through seed improvement, increased dryland and irrigated acreage, and improved production practices. From only 84,000 acres in 1950-51, the cotton area expanded nearly sixfold to 494,000 acres in 1956-57. Acreage slipped below 400,000 the following season before starting the upward surge that carried it to a record high of 855,000 acres in 1962-63.

Again in 1963, area devoted to cotton fell to an estimated 650,000 acres in contrast to the upward trend. The decline in acreage in 1963, mostly in raingrown areas, resulted partly from increased prices received for legumes a year earlier, unfavorable weather at planting time, and some uncertainty regarding support prices for cotton.

In line with the increased investment in irrigation projects, cotton grown under irrigation rose from almost none prior to World War II to 345,000 acres, or 44 percent of the total cotton area, in 1962-63. Dryland cotton acreage also increased sharply over the years as farmers found that they could increase the utility of their nonirrigated fields by planting cotton on land that formerly remained fallow in alternate years after wheat crops.

The uptrend in cotton acreage may be attributed to a number of influencing factors. Foremost among these was the relatively high support price paid for cotton. Many farmers feel that with the general high level of price supports that has prevailed, cotton has been one

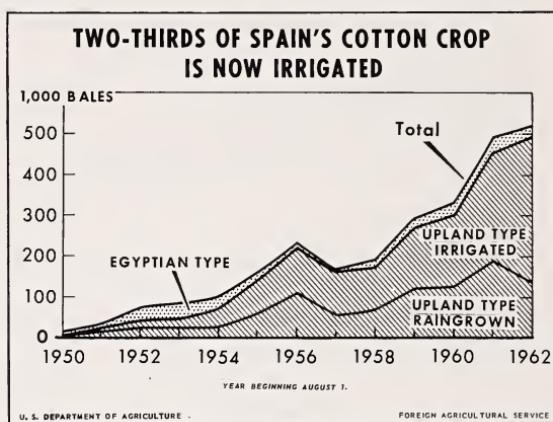
of their most profitable cash crops. With seed, fertilizer, and cash for producing cotton advanced by the concessionaires or gins, with technical advice and assistance from government and concessionaire or gin technicians, and with an assured market and favorable prices for the harvest, cotton was an attractive crop compared with other alternatives. Larger production was encouraged by the government to meet more of the increasing consumption needs, and as a means of reducing the need for raw cotton imports.

With the rapid expansion in area devoted to cotton, it would not have been unreasonable to expect the average yield per acre to drop. However, quite the opposite has occurred as impressive improvements in yield per acre have gone hand-in-hand with increased acreage in the past decade. Before 1950, average yields for total acreage were generally below 100 pounds of lint per acre. Yields began to improve from that date, however, and reached 346 pounds per acre in 1963-64. While yields are below the average in many other countries with similar climates, they are above the 1963-64 world average of 296 pounds. However, in Spain's irrigated areas yields now average about a bale per acre--more than double the outturn in raingrown fields.

Yield improvements, as in the case of acreage increases, have resulted in part from the stimuli of high support prices for cotton and an assured market compared with other crops. The means by which yields have been increased include use of more irrigation, fertilizer, insecticides, improved and adapted varieties of planting seed, and general improvement in cultural practices. Much of the increase in yields is attributable to the direct interest that the government has taken in bringing about yield improvements. This has been reflected not only in technical advice, assistance, and regulation at the farm level, but in financial aid in producing and marketing the crop.

As a result of increased acreage and higher yields, cotton production in Spain leaped from 18,000 bales in 1950-51 to 232,000 in 1956-57, and to more than half a million in 1962-63. Whereas in 1963-64 the area under irrigation was only 51 percent of the total cotton acreage, relatively high yields in these areas pushed

the share of Spain's crop grown under irrigation to 74 percent of the total. The drop in production to an estimated 468,000 bales in 1963-64 was, of course, a result of the cut in acreage.



Cotton is grown in Spain from as far north as Zaragoza--not far from the Pyrenees Mountains--to the southern tip of the country, and from Portugal on the west to the Mediterranean on the east. In the past decade, cotton has been grown in as many as 33 of the 50 provinces in Spain. This widespread production can probably be attributed largely to Spain's temperate climate and relatively long growing season. However, such natural factors as scarcity of water, high altitudes, and unsuitable soil types have tended to rule out the practicability of cotton production in many localities. As a result, a large percentage of the cotton acreage and production is concentrated in several areas such as Sevilla, Cordoba, and Badajoz.

The largest concentration of cotton acreage and production is in southern Spain in the Provinces of Sevilla, Cordoba, Cadiz, and Huelva, principally in the Guadalquivir River basin. These four provinces account for over two-thirds of the country's cotton area and production. Sevilla and Cordoba are the two largest cotton-producing provinces; each has accounted for roughly one-fourth of total Spanish cotton production in recent years.

Another large concentration of cotton production is farther north, on the western border near Portugal in the provinces of Badajoz and Caceres. Development of

cotton production in this area primarily reflects addition of irrigation facilities in the basins of the Guadiana and Tajo Rivers. Badajoz and Caceres provinces now account for around one-fifth of the total cotton acreage and production of Spain.

There are several smaller cotton-producing areas in Spain. Relatively small quantities of cotton are grown around Ciudad Real, Talavera de la Reina, and Zaragoza, and some is even grown as far north as Huesca province in northeastern Spain.

Types and varieties

By far the largest part of Spain's cotton crop is made up of American Upland varieties. In 1963-64, about 95 percent of the crop was of this type. The Upland type is comprised chiefly of varieties obtained originally from the United States. Staple lengths range from about 13/16 inch to 1-1/8 inches.

Production of Egyptian-type cotton in Spain was first reported during World War II, and now makes up about 5 percent of total cotton production. It fills at least a part of the nation's need for longer-length fiber. The Egyptian-type cotton is designated as Giza 7. The parent stock was the Giza 7 variety that was the main long staple variety grown in Egypt in the late 1930's and early 1940's. It was selected and adapted for growing conditions found in the coastal areas of southeastern Spain. The staple length ranges from 1-1/4 inches to 1-3/8 inches and longer.

The adjoining provinces of Alicante, Murcia, and Valencia on the Mediterranean have usually produced from about one-half to three-fourths of the Egyptian-type cotton in Spain. On down the eastern coast, the three provinces of Almeria, Granada, and Malaga account for 5 to 10 percent of this type of cotton. Around 3,000 to 5,000 bales a year are grown in Cadiz, and smaller quantities in the northeastern Mediterranean provinces of Castellon de la Plana, and as far north as Tarragona, Barcelona, and the Balearic Islands. Small quantities of Egyptian-type cotton have been grown in the Canary Islands, mostly in the province of Santa Cruz de Tenerife. However, cotton production there is being replaced by other crops.

Beginning with the 1962-63 season, cotton producers were required to plant one of the varieties authorized for their specific province. The ministry of Agriculture distributes seed each year to the ginning companies for redistribution to individual farmers. These regulations are not enforced in the few areas where contracts with the former concessionaires have not yet expired. The varieties currently allowed in specific provinces are as follows:

<u>Provinces</u>	<u>Varieties allowed</u>
Madrid, Avila, Toledo, Malaga, Ciudad Real	Andalucia
Caceres	Andalucia, Texacala
Badajoz	Paymaster, Texacala
Cordoba	Coker, Texacala
Jaen	Coker, Paymaster, Texacala
Sevilla	Andalucia, Coker, Stoneville 3202, Texacala
Cadiz	Giza 7, Texacala
Murcia, Alicante, Valencia, Castellon	Coker, Giza 7
Balearic Islands	Coker
Canary Islands	Giza 7

Farming practices

While some farms are comprised of several thousand acres, with perhaps one thousand or more acres in cotton, a large proportion of Spain's farms average less than 15 acres in size. In most cases, about 15 acres are allotted to each farmer on the government-sponsored land resettlement projects. Cotton is generally grown on a relatively small part of the average farm, although there is considerable variation from farm to farm, and from area to area. There has been a growing tendency to plant as much cotton as possible. Where practiced, a common crop rotation might be grain and cotton, or tobacco, grain, and cotton. Before the advent of cotton, producers would normally plant wheat one year and let the land lie idle the next year in order to build up a moisture

supply. Now cotton is planted in the "off" year. The producers say that the fertilizer not utilized by the cotton crop gives a boost to the following wheat crop, which results in increased wheat yields. Very little double cropping is practiced.

Much of Spain's cotton is grown on rented farms. The most common leasing arrangement is a share cropping agreement between tenant and landlord. In some areas, the renter and the owner share the harvest on the basis of 45 to 50 percent to the renter and the remainder to the owner. The owner generally supplies such items as the land, irrigation water, fertilizer, and sometimes half of the seed.

Considerable quantities of commercial fertilizer are used on cotton produced under irrigation, but relatively little animal or green manure is applied. The heaviest applications are usually phosphorus in the form of basic slag or superphosphate, and nitrogen. Potassium is available in sufficient quantity in most soils. Where available, weekly applications of irrigation water are applied in the hot summer months, with less frequent waterings in the spring and fall.



Hand labor is still widely used in Spain's cotton fields.

Historically, very little machinery has been used in cotton farming operations in Spain. Probably the principal reasons for this have been the small size of the average cotton operation, the abundance of family labor and low-cost labor, and the large investment needed to buy and operate machinery. As cotton producers become more prosperous, however, and as more machinery is made available for purchase or rent, more equipment will very likely be used. Limited quantities of machinery custom work are already in evidence in the new resettlement projects. Also, some of the larger operators are finding it advantageous to increase mechanization as labor becomes somewhat less plentiful and more costly.

At the present time, Spanish cotton production is not seriously affected by insects and disease, although there are some. Spider mites probably cause the most damage, while aphids and bollworms are problems in some areas. Insecticides most frequently applied include DDT and BHC. It seems probable that control of pests will become more difficult in the future as insect populations build up in the wake of Spain's cotton acreage expansion and as irrigation raises the moisture level in watered fields. Also, winters are not cold, and winter-kill of insects is low. Cerasan is sometimes used to treat seed against diseases.

Competition with other crops

Cotton makes a strong bid for available cropland as long as the guaranteed price is rewarding, within the limits set by climate, soils, and topography. Though cotton has gained popularity in many areas of Spain, it has been of greatest economic significance to the main producing areas in the southern part of the country. For generations the farm economy in these areas was based largely on olives and wheat. Cotton fits well into this two-crop system and into a wheat-fallow rotation, because the heaviest workload for cotton comes during slack periods for other crops. The cotton planting season comes before the spring wheat harvest begins, and cotton picking fits between the grain and olive harvests in the fall. On irrigated land, cotton can compete strongly from an income standpoint with other crops such as corn, vegetables, and fruit.



Dams such as this one on the Guadiana River near the Portuguese border have facilitated development of much irrigated land suitable to cotton.

On the other hand, some attention is being shifted to crops other than cotton, partly in order to obtain a more balanced agriculture. Considerable encouragement is now being given to the production of sugar beets; and, if the relative price is favorable, sugar beets may compete strongly with cotton in some areas. Spain produces enough wheat in very good crop years to meet domestic requirements, but must import sizable quantities in other years. The rising standard of living, the increased tourism in Spain, the movement of population into cities, and prospects for improvement in distribution methods may also cause more land to be devoted to the commercial production of vegetables. Though Spain is largely self-sufficient in the production of vegetables in good crop years, the wide price swings make production hazardous. However, consideration is being given to the possibility of increased shipments to other European countries and to the encouragement of the domestic canning industry, particularly into areas of under-employment. It is hoped that these moves will stabilize vegetable prices and perhaps result in increased production.

Government policy

The agricultural policy of Spain is in general strongly protectionist. Foreign trade in agricultural commodities is in large part handled by government or semi-government organizations. Acreage allotments and price supports are fixed for wheat and rice, and both producer and consumer prices are controlled for olive oil. Fixed prices are set and an assured market maintained for cotton, sugar beets, tobacco, and several other crops.

Spain's official cotton policy has changed considerably in recent years. For the most part, the government has promoted increased production by guaranteeing the farmer a ready market for his harvest at relatively high support levels and by providing economic and technical assistance. This assistance has been handled by the Servicio del Algodon, an agency of the Ministry of Agriculture, with field headquarters in Sevilla and substations in the various producing areas. The Servicio advises farmers about the use of insecticides, fertilizer, and cultural practices. The agency also maintains seed improvement and multiplication work, and provides seed testing and cotton classification service. Experiments are being carried on to determine adaptability to climate, soils, and other natural factors in various sections of the country, resistance to insects and diseases, and other influences on such varieties as Acala 4-42, Acala 1517, Rex, Stoneville 3202, Karnak, Menoufi, Ashmouni, and others.

Before the start of the 1962-63 season, a system of ginning concessionaires was maintained to insure farmers a ready cash market and adequate ginning facilities. These concessionaires operated in designated areas on a monopoly basis. All seed cotton was sold to the concessionaires at fixed prices in terms of three grades which were regulated by the Servicio. Each concessionaire extended technical assistance and credit to farmers to use in buying seed, fertilizer, and insecticides.

At the beginning of the 1962-63 season, the concessionaires were replaced by a new system of private and cooperative gins, except that concessionaires were allowed to operate as usual until their

contracts expired, or they could enter into the new system. Under the new system, cotton farmers sign an annual contract with one of the ginning companies established under the new law and agree to use authorized planting seed. As in the old system, all seed cotton must be delivered to the ginning company, but competition among ginning companies has reportedly resulted in some contracts that call for sale prices slightly above the minimum level.

The ginning companies are required to distribute the necessary planting seed to producers at fixed prices and to advance funds for cultivation expenses. They also provide inspection service and technical assistance in the fight against insects and diseases. Both the old and the new ginners are continuing to work on seed improvement and reproduction studies, and sizable quantities of seed have been purchased from the United States in recent years for this purpose. Reportedly, several Spanish organizations and U.S. seed companies are interested in a joint venture for the production of certified seed for Spain. Finally, the gins class and purchase, at the minimum or contracted price, all seed cotton delivered by farmers with whom agreements are held.

Ginning and marketing the crop

Cotton produced in Spain is normally sold by the farmer as seed cotton upon delivery to the gin that holds a contract with the farmer. Minimum prices are guaranteed to the farmer. The seed cotton is graded as it is received at the gin by representatives of the Ministry of Agriculture, and the farmer is paid on the basis of quality. As a rule, the cotton is not graded again, but a reclassification can be demanded in cases where the ginner feels that the grade of a specific lot was too high.

Since the Spanish support price is now well above the world level, a lower price is paid to the producer for the share of the crop that is available for export. Under existing legislation, each fall the Minister of Agriculture is required to determine the quantity of cotton that will be allowable for export. This quantity is not to exceed 20 percent of total production and may

be considerably less. This percentage of each farmer's harvest is sold at the lower export price. Actually, the farmer receives a blended price that represents an adjustment between the domestic and export prices. No export of Egyptian-type cotton is allowed.

The following tabulation shows the producer support prices in U.S. cents per pound, converted from seed cotton to lint on the basis of 3 pounds of seed cotton to 1 pound of lint:

Seed cotton grade	Upland type		Egyptian type
	For domestic use	For export	For domestic use
	<u>cents/lb.</u>	<u>cents/lb.</u>	<u>cents/lb.</u>
1	38.55	26.76	47.07
2	35.16	24.48	41.40
3	29.49	20.40	28.92

In September 1963, the Minister of Agriculture decreed that 12 percent of the current Upland-type cotton crop could be exported. Therefore, the blended price received by farmers for their 1963-64 harvest, on an equivalent lint basis, would be as follows: Grade 1, 37.13 U.S. cents per pound; Grade 2, 33.88 cents; and Grade 3, 28.40 cents. These blended prices are only about 3.7 percent below the support prices for cotton that is sold for domestic use.

Ginning facilities are generally adequate to handle the current production in Spain, though some areas where cotton production is climbing rapidly could utilize additional capacity. Most gins have the necessary warehouse space to store considerable quantities of seed cotton. The unginned cotton is generally classed and stored according to grade. Though some gins located in concessionaire areas are old, Spain has many modern, well-equipped gin establishments. Some are equipped with U.S. machinery.

Gins in Spain turn out a flat or gin bale that is fairly uniform in shape but varies widely in weight. Bale weights range from about 420 pounds to more than 875 pounds. Probably three-fourths, however, weigh between 485 and 550 pounds net weight. The average bale is considered about 220 kilograms or 485 pounds in weight. Jute bagging is generally used for covering the package, though some cotton bagging has been used recently. The bagging is used only once.



This modern gin near Badajos is representative of many installed in recent years as cotton production climbed.

Under the present system, ginning is only a part of the service provided to the cotton farmer by the owners of the gin. The gin owner also has the responsibility for supplying the producer with planting seed, credit, and technical aid. As payment for his services, the ginner takes possession of the cottonseed upon ginning and also receives an additional fee from the government.

In the past, all of the cotton produced in Spain was delivered to ginning concessionaries by the farmers. The concessionaires paid the farmer the minimum support price, ginned the cotton, and then delivered the baled fiber to the government at a higher fixed price. Distribution of the domestic crop after ginning, as well

as imported cotton, was handled by the Centro Algodonero Nacional, an organization of cotton agents, merchants, and importers, located in Barcelona.

The Center purchased the cotton from the government and resold it to mills at a higher set level--the difference went into the national treasury and was used in part to promote cotton production and in part to assist in the exportation of cotton textiles. Under this arrangement, the Center acted as wholesale distributor. Later, distribution was handled by the Servicio Comercial de la Industria Textil Algodonera (SECEA). This organization also issued licenses for the Ministry of Commerce to importers for commercial imports of cotton.

Under the present system, the ginners may sell direct to cotton merchants and spinners. As in the past, the Ministry of Agriculture sets the top price that a ginning company may charge for the lint cotton. The ginning companies are required to deliver to the Development Institute of Textile Fiber Production the cotton needed to meet export requirements. Bales for export are to be processed in conformity with the dictates of the Institute and delivered at the stipulated prices. In the event that a ginning company is unable to sell all cotton ginned, the Ministry of Agriculture may allow the Institute for the Promotion of Textile Fibers a month after the end of the season, to purchase the unsold fiber at a discount up to 15 percent of the maximum established level.

Fiber testing is performed by the Instituto de Fomento de la Produccion de Fibras Textil, and the Centro Algodonero Nacional for members and nonmembers of the organization. Special attention is devoted to testing Spanish cotton, and reports of results are issued every 2 months. Fiber as well as spinning testing services are also available from several commercial laboratories in Spain, and a number of the larger mills have some fiber-testing equipment. In addition to fiber testing activities, the Center is a signatory to the universal cotton standards agreement and has installed artificial lighting and air conditioning in its classing rooms. The Center has a committee to study problems involved in standardization of Spanish cotton and another committee to handle

appeals and arbitrations. The Center is a member of the Raw Cotton Merchants Committee and the Joint Cotton Committee of the International Federation of Cotton and Allied Textile Industries.

Outlook for cotton production

A number of factors suggest that a moderate upward trend can be expected in Spain's cotton production for some years to come, though further expansion of acreage may be slow. In fact, there is some opinion that cotton acreage, mainly in dryland areas, will probably decline over the next few years. Of course, so long as present conditions exist there are strong incentives to increase production of this crop. The government is pushing additional irrigation and resettlement. Cotton fits well into many crop rotations, and the farmer is assured of a ready market at attractive prices. Looking ahead, it seems likely that Spain will continue for some time to improve the efficiency of agriculture and to continue to promote expanded acreage under irrigation. Also, it seems unlikely that Spain will cut sharply the domestic support price within the next few years, although there is not universal agreement about this.

It is true that in 1963-64 minimum blended prices paid to producers were reduced and that acreage declined. However, the drop in cotton acreage, almost all in raingrown areas, probably should be attributed more to unfavorable weather at planting time, increased prices for legumes a year earlier, and expectation of higher support prices for sugar beets, than to the 3.7 percent decline in farmers' blended price for their 1963-64 cotton harvest. Actually, the 1963-64 crop year was unfavorable for the producers of several major commodities, as indicated by a decline in the production of sugar beets, wheat, oats, and several other crops.

Two opposite views are expressed in regard to Spanish cotton producers' reactions to lower support prices. As might be expected, the opinion expressed by many is that domestic production over the next several years will continue to rise only if the present high support prices are maintained, and that reduction

in the support level would be reflected by a drop in the size of the local harvest. Infact, there seemed to be a feeling among some producers that the downward adjustment in support prices in 1963-64 made cotton less attractive, and any further price cuts would mean less acreage devoted to cotton. Although not yet clear-cut, there is some indication that emphasis in the overall agricultural policy is shifting somewhat from the previous strong emphasis on cotton. Some evidence of this type of trend may be shown in the change from the concessionaire system of cotton production and marketing. Under such circumstances, it appears that increased competition would come from some other crops, such as feed grains and oilseeds, particularly on dryland, and fruits and vegetables. Competition between crops probably would be even more keen in the event that Spain becomes affiliated with the Common Market. Also, Spain would find it more difficult to maintain a high price for her cotton and cotton textiles in the face of greater freedom of trade, either inside or outside the Common Market.

The above view is not unanimous. It is quite possible that domestic production of cotton would increase even with somewhat lower support prices, though the pace would be slow and would depend on increased yields. Spanish farmers seem to like to produce cotton, and the crop is becoming ingrained in the farming system. Even at lower prices, cotton might continue to find favor in the customary wheat-fallow rotation. On the smaller farms where family and low-cost labor is available, cotton stands out as an attractive cash crop because large quantities of labor can be utilized. Profits from cotton production now seem to be attractive in comparison with those from many alternative crops. Naturally, a reduction in the support price would lower these profits, but Spain has a long way to go toward more efficient production, and per-unit costs can be lowered through higher yields. Progress is being made in adapting varieties to different climatic conditions, while more efficient cultural practices such as the use of more fertilizer and better insect control could raise yields considerably.

THE COTTON TEXTILE INDUSTRY

Present structure

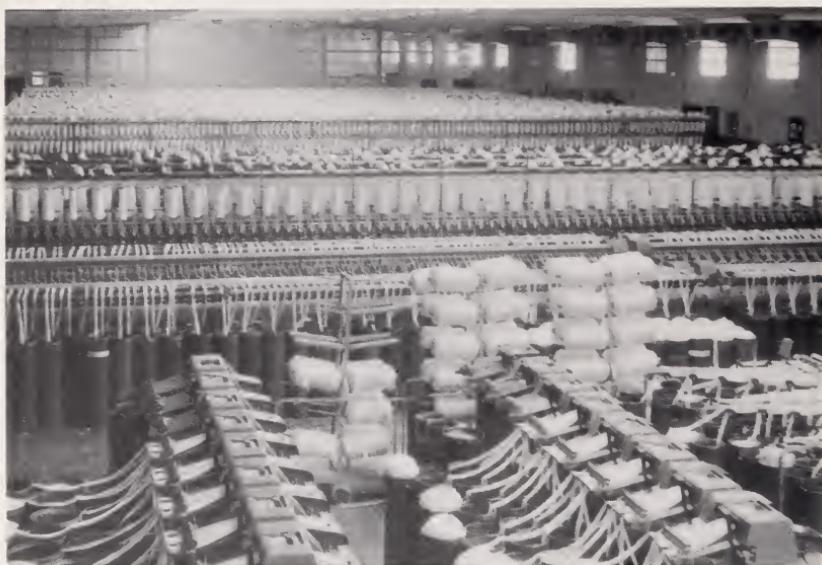
The Spanish cotton textile industry is for the most part comprised of extremely small family-owned spinning and weaving units. In 1962 the number of spinning mills was estimated at 260, with about 2,319,000 operating spindles, and the number of weaving mills at 735, with about 57,000 looms. Nearly three-fourths of the spindles and looms are located in Barcelona Province. A textile mill census by the National Statistics Institute, made several years ago, indicated that about one-third of the mills had less than 5,000 spindles each and another one-third had from 5,000 to 10,000. Less than one percent of the mills had as many as 50,000 spindles.

The weaving section of the industry is characterized by small units to a greater extent than the spinning section. Nearly 60 percent of the weaving factories have less than 50 looms each, and over 90 percent of the mills have less than 200 looms. At the other end of the scale, less than 4 percent of the largest mills have more than one-fourth of the looms in Spain.

The plight of the industry, with its many small units, is further complicated by the antiquated condition of much of the mill equipment. More than half of the spinning and weaving equipment is probably more than 40 years old, and it has been estimated that close to one-fifth of the spindles in use were installed before 1900. The labor situation is another factor contributing to Spain's textile problems. Mill owners hesitate to replace ancient equipment with efficient, labor-saving machinery because existing legislation permits reductions in the labor force only under limited conditions. However, in some quarters, it is maintained that the overall stability in the cotton textile industry offsets in part the inflexible labor supply and the problems associated with outdated equipment.

As a consequence of the outmoded equipment, structure of the mills, and burdensome labor supply situation, the Spanish textile industry has found it

difficult to compete effectively with those of other European countries. On an average per unit basis, textile equipment in Spain turns out less than three-fourths as much as equipment in most other European countries, and a higher ratio of workers to equipment is required.



This new spinning mill in the cotton producing region near Merida is typical of the trend toward more modern facilities.

Nevertheless, some improvements are being made in the Spanish cotton textile industry. A few new large and well-equipped mills are being constructed, and a gradual reduction in the number of outdated spindles and looms is taking place. For example, the number of spinning mills and weaving mills declined by 14 and 49, respectively, from 1961 to 1962. Number of active spindles declined about 94,000, and there was a net reduction of over 1,000 looms, in this period. Also, the number of textile employees dropped by nearly 3,000, the average number of hours worked by each employee declined, and the output per man hour probably increased.

Over the years, many plans have been considered in the hope of solving the various problems of the industry. So far, however, little headway has been made, except for a small amount of self-financed

construction. Nevertheless, attempts to help the industry continue to be made, and a recent decree, discussed below, shows some promise. The Spanish Government is actively trying to aid this segment of the economy, as well as many others.

Recent developments

A recent official decree is intended to bring about changes that will help raise efficiency of the cotton textile industry and should lead also toward larger domestic consumption. In addition, it should help the industry meet increased competition from foreign textile industries--in general the countries within GATT, and most especially the other countries in Europe. Under the program provided for in the decree, the Cotton Textile Foundation has authority to purchase and destroy obsolete machinery or even entire plants. Textile firms can borrow money at attractive terms from the foundation or from the Bank of Industrial Credit to install modern equipment, to merge with other firms, or to enlarge facilities. Preference is granted to loan applicants on the basis of products to be manufactured, possibility of exporting textiles, and present capacity and efficiency of the equipment. The amount of credit to each firm cannot exceed 80 percent of the cost of new equipment and facilities, with an annual interest rate of 5 percent. In most cases, the loans are to be repaid in eight annual installments, with the first payment due in the year after the date of the loan.

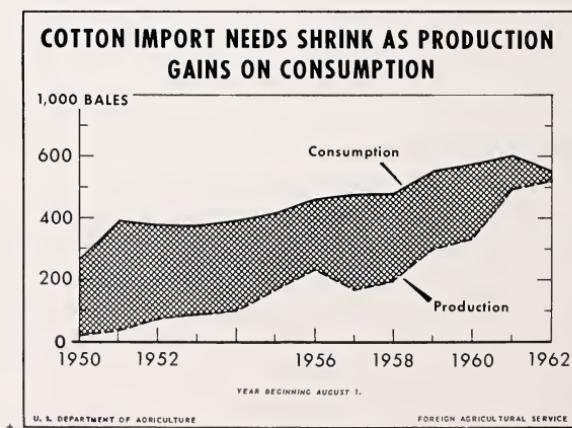
Firms undergoing reorganization under this plan will be allowed to reduce their labor force, after justification under the labor regulations. Workers who become unemployed because of mill reorganization will receive additional insurance, besides the usual unemployment benefits.

It remains to be seen whether this latest reorganization plan will be successful, and if so, to what extent. In the past, many plans were proposed, but it seemed that practical applications could not be worked out by the various segments of the industry and the Spanish Government. The current plan may

have a better chance of succeeding, for the government is eager to modernize the industry as soon as possible, as indicated by the requirement that individual firms reach an agreement with the negotiating committee on plans for that firm within 3 months after submitting an application.

Consumption of raw cotton

Consumption of raw cotton in Spain has increased in the past decade despite some of the problems indicated above. In 1961-62, consumption reached a peak of 600,000 bales, about two-thirds more than average annual use of about 360,000 in 1950-54, although exact figures on raw cotton consumption are not available. The moderate falloff to 550,000 bales in 1962-63 reflected the cyclical downturn in activity in the cotton textile industry, similar to the cyclical drop that season in many other countries. For a number of years before the early 1950's, consumption had usually remained between 300,000 and 350,000 bales. Consumption started to climb around that period, however, as consumer purchases turned up because of the rising population and increasing per capita income.



Per capita consumption of textiles has climbed sharply in the past decade and in 1960 was about double the 1950 figure, according to estimates by the Food and Agriculture Organization of the United Nations. In 1960, average per person consumption was about 12 pounds of all types of textiles. This is

a sizable increase over the 6.5 pounds of 1950, but far below consumption for the rest of Europe. Cotton textiles comprised 7.3 pounds of the total of all types of textiles used in 1960, against only 3.2 pounds in 1950. Actually, in 1960 cotton comprised a larger share of total per capita consumption than a decade before. Total bales of cotton consumed have continued to increase, and although per capita use held relatively steady between 1957 and 1960, there is some indication that since 1960 the upward trend in per capita use has resumed. The use of manmade fibers has risen nearly as rapidly as that of cotton, while the quantity of wool used per person has held about constant, though its share of total textile use has slipped.

Although cotton has made a favorable showing on both per capita and total consumption bases, manmade fibers have also made large gains in the expanded textile market in Spain, as indicated by their increased per capita consumption. Also, the use of manmade fibers in cotton textile mills has increased. In 1960, for example, this amounted to the equivalent of over 60,000 bales of cotton.

The intensified interfiber competition between cotton and manmade fibers is further indicated by the rising manufacture of staple fiber, which is the type most often used to replace cotton in textile products. Cellulosic staple fiber was not produced in Spain prior to World War II, but by 1962 production reached 85.4 million pounds. The production of noncellulosic fiber is also rising in Spain, though at present it represents a very small part of the total fiber output. A significant factor in the competition between cotton and manmade fibers is the relatively high price of cotton.

Distribution of cotton textiles

Under the market system for cotton textiles in Spain, textile mills sell their cloth to the ready-made clothing industry, to wholesalers some of whom have retail outlets, and to large retailers. Ordinarily, textiles do not move through mail order houses or retail purchasing groups. About one-third of Spain's cotton fabrics are sold as yard goods, while a somewhat larger quantity goes into made-up goods, according to an October 1963 release of SECEA. Other

large uses of cotton are in knitted goods and industrial goods, while smaller quantities go into sewing threads.

Distribution patterns in Spain differ from those of most other European countries. More than one-half of the population lives in rural areas--either on the farm or in small towns and villages. Though the picture is changing, much of the Spanish population still depends directly or indirectly upon agriculture for its income. Since agricultural incomes tend to be low, and since Spanish textiles are relatively high-priced because of the high price of raw cotton and inefficient structure of the industry, consumer purchases are at a low level, in spite of improvement in recent years.

Expanding demand for cotton products

Some of the credit for the increase in cotton consumption in Spain in recent years must be given to the market development program carried on jointly by the USDA's Foreign Agricultural Service, the Cotton Council International, and Servicio Comercial de la Industria Textil Algodonera. Market development operations are carried out in Spain by the Servicio. CCI provides technical supervision of the project. The Servicio pays one-half of the program cost, while FAS pays the other half with foreign currencies generated by the sale of surplus agricultural commodities under the provisions of Public Law 480.

Since the start of the program in 1957, the Servicio has maintained a program of sales promotion, consumer information and education, and market research. These activities have been directed in four major areas: fashion, sales promotion campaigns, press and other consumer services, and market research. These activities are designed to keep cotton in the foreground in both the high fashion and volume markets. These methods not only focus the public eye on cotton apparel, including ready-made goods, and stimulate interest in bigger and better wardrobes, but also direct attention to the good inherent quality characteristics of the many other cotton textile products.



Cotton market promotion in Spain represents Spanish and U.S. cooperative efforts in sales promotion, consumer and press service, market research. Above, Madrid Cotton Week window display emphasizes qualities of cotton. Below, at Manresa, department store displays use of cottons in household.



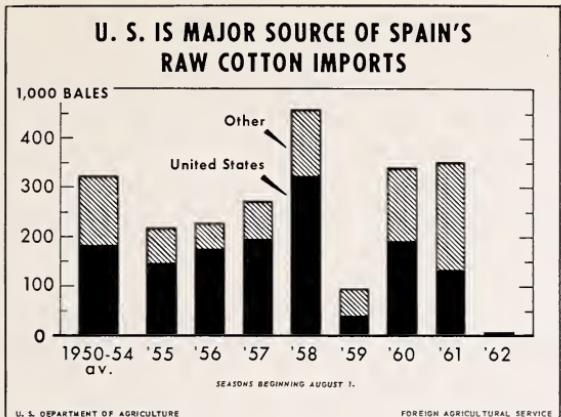
Although the various campaigns have been consumer-oriented, work with manufacturers and retailers has also been strongly emphasized, because these groups often decide what fiber is to be used in garments and products stocked in the stores, long before the consumers express their preference. These groups benefit directly and immediately from consumption increases. Therefore, their economic interest is conducive to cooperation in cotton market development. Market research provides facts and statistics to help direct promotion to areas where most effective work can be done.

It seems probable that cotton consumption in Spain will rise over the next several years as domestic and foreign markets expand. Pertinent to the trend of total cotton consumption will be the speed and effectiveness with which textile production costs can be lowered. This hinges partly on benefits derived from the textile industry reorganization plan now underway. These factors in turn will have a definite bearing on Spain's future ability to compete effectively in foreign markets for cotton textiles as well as larger per capita purchases in the domestic market. In addition, increased domestic cotton consumption will be aided by a rising population, and higher, and perhaps more evenly distributed, income partly as a result of implementation of the Economic and Social Development Plan. It should be noted, however, that the impact of such changes will likely be accompanied by intense competition between cotton and manmade fibers.

FOREIGN TRADE IN COTTON AND COTTON PRODUCTS

Imports of raw cotton

Spain was a large importer of raw cotton for many decades. Purchases ranged between 200,000 and 400,000 bales per year for over 50 years, the peak being 560,000 bales in 1915-16. Because of the large 1962 crop, imports in 1962-63 were the smallest since before 1915. As a matter of fact, imports have fallen below 200,000 only three times since that date.



Over the years, the United States has supplied a substantial part of Spain's cotton purchases. Prior to World War II, Egypt and India-Pakistan were the only important competitors with the United States in Spain's raw cotton import market. After World War II, Brazil moved into prominence; and in the past few years, Mexico has made some sizable shipments. In the past five seasons, 1958-62, the United States supplied an annual average of 138,000 bales, or 55 percent, of Spain's total imports. Most shipments from the United States have been financed under U.S. Government programs, principally Title I of Public Law 480 and the Mutual Security Program.

Exports of cotton and cotton products

Spain shipped about 8,000 bales in 1961-62, the first exports of raw cotton recorded for that country. Shipments were several times larger in the following season, which reflected Spain's desire to reduce her excess supply of certain types and qualities of domestically-produced cotton. Reportedly, most of the shipments were destined for France and West Germany, and were made up of low-quality, shorter staple cotton.

The success of Spain's efforts to raise exports of cotton textile products is illustrated by the sharp increase that has taken place since 1959. Exports of cloth averaged over 180 million square yards annually in 1960-62, compared with only 40 million yards per year in the previous 5 years. Shipments

of yarn climbed to an annual average of nearly 12 million pounds in the past 3 years, from only 428,000 pounds annually in the 1955-59 period. Major destinations of Spain's textile exports include the United Kingdom, the United States, and West Germany. The unprecedented volume of Spanish cotton textile exports has caused some importing countries to place restrictions on such exports in accordance with provisions of the Long-Term Cotton Textile Arrangement, an international agreement made under GATT between the major cotton textile importing and exporting countries.

Trade restrictions

Spain's agricultural policies, as well as her overall economic policies, have been directed toward greater liberalization since the economic stabilization program got underway in 1959. This was a departure from the official policy up to 1959, which was pointed toward maximum self-sufficiency. Although protectionist views still exert considerable influence on agricultural policies, headway has been made toward a more liberal concept of international trade.

Though Spain has been liberalizing foreign trade since 1959, and more than half of the imports in 1962 were traded on an unrestricted basis, the most important agricultural imports are still under some degree of state trading control. As discussed earlier, cotton import purchases were under the control of the Servicio Comercial de la Industria Textil Algodonera (SECEA). This organization sometimes made the actual purchase and resold the cotton to the user. In other cases, SECEA transferred import licenses from the Ministry of Commerce to importers who make purchases directly. Currently, cotton is imported by cotton merchants or mills through the Ministry of Trade, though SECEA may participate in cases where the cotton is imported to replace cotton previously exported in the form of textiles.

Raw cotton imports are subject to a 20 percent ad valorem tax and a "fiscal" tax of 3 percent upon arrival in Spain. These taxes are passed on to the mill in regular sales, though they may be waived in

specific cases. The tax not only serves as a source of revenue but evidently also is designed to bring the price of imported cotton near the level paid for the domestic crop.

Outlook for foreign trade in cotton and cotton products

Imports of raw cotton into Spain in the next several years probably will not be as large as those of most recent years. However, rather sizable purchases may be made in some years when the domestic crop is short, and to meet mill requirements for specific types and qualities. It seems certain that imports of extra long staple and longer staple Upland-type cotton will continue for some time. The United States can look forward to filling a substantial part of this need with sales for dollars as Spain's economy improves, provided prices are competitive. Of course, it is possible that in the next several years Spain's consumption of cotton will again forge ahead of domestic production; in that case imports would reach significant levels again. Likewise, if domestic consumption holds up and local production slips, Spain would be back in the market for sizable quantities of raw cotton.

Imports of raw cotton as well as exports of cotton textiles could be substantially affected by a government decree issued in June 1963, to take full effect in November 1963. In essence, the decree authorizes duty-free imports of raw cotton to replace the cotton used in textiles previously exported.

At first glance, it would seem unlikely that Spain will export significant quantities of cotton during the next several years. The domestic support price is well above the world level, and exports are possible only with the aid of a subsidy, or something similar to the modified two-price system now in operation. Of course, exports of certain qualities in excess supply are likely to continue. On the other hand, Spanish officials may feel that the hard currency gained from the sale of cotton outweighs the drain placed on the domestic economy by an export subsidy. And, though

it does not seem likely at present, Spain could compete in the world cotton market if domestic per-unit costs of production could be reduced sufficiently to allow a sizable reduction in the support level.

The outlook for a high level of cotton textile exports hinges in large part on Spain's ability to compete effectively in the world textile import markets. Although this has been accomplished in recent years through various subsidies, the most promising avenue could well be through the textile industry reorganization now getting underway. While bilateral agreements under the Long-Term Cotton Textile Arrangement can be used to regulate the volume of certain types of textile goods that Spain exports, they will allow an orderly expansion in such exports, and also will tend to prevent uneconomic expansion of manufacturing facilities. In addition, prices that Spanish mills pay for raw cotton in relation to prices of cotton in world markets will have an important bearing on textile export levels. At any rate, Spain is making serious efforts to promote textile exports, primarily through the use of tax refunds, credit, and credit insurance.

STATISTICAL APPENDIX

Table 1.--COTTON: Acreage, production, and lint yields in Spain,
seasons beginning August 1, 1940-1963

Season	Acreage	Yield	Production
	<u>1,000 acres</u>	<u>Pounds per acre</u>	<u>1,000 bales¹</u>
1940.....	43	78	7
1941.....	46	125	12
1942.....	81	118	20
1943.....	117	82	20
1944.....	115	113	27
1945.....	60	64	8
1946.....	126	88	23
1947.....	69	90	13
1948.....	124	116	30
1949.....	90	75	14
1950.....	84	103	18
1951.....	110	153	35
1952.....	167	213	74
1953.....	218	187	85
1954.....	267	176	98
1955.....	406	190	161
1956.....	494	225	232
1957.....	396	199	164
1958.....	417	220	191
1959.....	557	254	295
1960.....	618	256	330
1961.....	788	298	490
1962.....	855	290	517
1963 ²	650	346	468

¹ Bales of 478 pounds net before 1946, and 480 pounds thereafter converted from bales of 220 kilograms net.

² Preliminary.

Source: Instituto de Fomento de la Produccion de Fibras Textiles.

Table 2--COTTON: Acreage in Spain by types, raingrown and irrigated, seasons beginning August 1, 1940-63

Season	American type		Egyptian type Irrigated	Total
	Raingrown	Irrigated		
	1,000 acres	1,000 acres	1,000 acres	1,000 acres
1940.....	43	(1)	0	43
1941.....	46	(1)	0	46
1942.....	81	(1)	0	81
1943.....	116	1	(1)	117
1944.....	114	1	(1)	115
1945.....	57	(1)	3	60
1946.....	116	(1)	10	126
1947.....	59	2	8	69
1948.....	105	5	14	124
1949.....	68	6	16	90
1950.....	54	12	18	84
1951.....	66	17	27	110
1952.....	105	23	39	167
1953.....	116	46	56	218
1954.....	132	84	51	267
1955.....	237	134	35	406
1956.....	289	176	29	494
1957.....	231	154	11	396
1958.....	242	153	22	417
1959.....	327	194	36	557
1960.....	352	234	32	618
1961.....	471	277	40	788
1962.....	477	345	33	855
1963 ²	321	312	17	650

¹ Less than 500 acres.

² Preliminary.

Source: Instituto de Fomento de la Producción de Fibras Textiles.

Table 3.--COTTON: Lint yields in Spain by types, raingrown and irrigated, seasons beginning August 1, 1940-63

Season	American type		Egyptian type	All types
	Raingrown	Irrigated	Irrigated	
	Pounds per acre	Pounds per acre	Pounds per acre	Pounds per acre
1940.....	78	117	--	78
1941.....	125	99	--	125
1942.....	118	106	--	118
1943.....	82	148	239	82
1944.....	113	151	154	113
1945.....	50	177	319	64
1946.....	74	166	240	88
1947.....	81	240	180	90
1948.....	101	192	206	116
1949.....	28	160	240	75
1950.....	44	200	213	103
1951.....	124	169	213	153
1952.....	155	230	357	213
1953.....	99	261	309	187
1954.....	87	263	264	176
1955.....	119	290	288	190
1956.....	178	303	232	225
1957.....	112	327	218	199
1958.....	127	339	415	220
1959.....	173	369	373	254
1960.....	169	361	450	256
1961.....	191	459	456	298
1962.....	139	493	364	290
1963 ¹	179	509	480	346

¹ Preliminary.

Source: Instituto de Fomento de la Producción de Fibras Textiles.

Table 4.--COTTON: Production in Spain by types, raingrown and irrigated seasons beginning August 1, 1940-63

Season	American type		Egyptian type Irrigated	Total
	Raingrown <u>1,000 bales¹</u>	Irrigated <u>1,000 bales¹</u>		
1940.....	7	(²)	0	7
1941.....	12	(²)	0	12
1942.....	20	(²)	0	20
1943.....	20	(²)	(²)	20
1944.....	27	(²)	(²)	27
1945.....	6	(²)	2	8
1946.....	18	(²)	5	23
1947.....	9	1	3	13
1948.....	22	2	6	30
1949.....	4	2	8	14
1950.....	5	5	8	18
1951.....	17	6	12	35
1952.....	34	11	29	74
1953.....	24	25	36	85
1954.....	24	46	28	98
1955.....	59	81	21	161
1956.....	107	111	14	232
1957.....	54	105	5	164
1958.....	64	108	19	191
1959.....	118	149	28	295
1960.....	124	176	30	330
1961.....	187	265	38	490
1962.....	138	354	25	517
1963 ³	120	331	17	468

¹ In bales of 478 pounds net before 1946 and 480 pounds thereafter converted from bales of 220 kilograms net.

² Less than 500 bales.

³ Preliminary.

Source: Instituto de Fomento de la Producción de Fibras Textiles.

Table 5.--COTTON: Acreage in Spain by Provinces, seasons beginning August 1, 1950-51

Province	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
	<u>1,000 acres</u>											
Alicante..	4	3	11	24	21	12	8	1	7	16	13	17
Badajoz..	2	2	4	10	16	32	48	39	36	53	64	83
Caceres..	7	6	11	12	19	28	44	38	42	51	53	62
Cadiz....	7	5	8	13	22	48	36	47	56	69	93	124
Cardoba..	8	30	55	51	61	100	135	91	106	151	151	167
Huelva....	3	(1)	3	4	7	10	16	15	17	11	17	19
Jaen.....	2	3	1	1	3	6	9	5	6	5	15	22
Murcia...								2	1	6	11	10
Sevilla..	38	35	46	60	65	115	135	123	118	142	151	226
Toledo..	1	3	4	6	8	11	15	11	9	9	13	15
Valencia..	2	3	3	7	9	11	4	2	2	3	3	5
Others...	10	17	13	15	24	25	36	19	18	21	26	27
Total..	84	110	167	218	267	406	494	396	417	557	618	788

¹ Less than 500 acres.

Source: Anuario Estadistico de la Produccion Agricola.

Table 6.--COTTON: Lint yields¹ in Spain by Provinces, seasons beginning August 1, 1950-61

Provinces	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
	Pounds per acre											
Alicante..	383	416	655	338	286	291	315	303	559	431	526	514
Badajoz..	72	123	240	175	202	197	208	242	272	275	235	255
Caceres..	203	268	265	321	295	340	218	359	324	335	341	377
Cadiz....	69	80	146	175	197	142	204	127	200	229	247	224
Cordoba..	19	143	187	156	133	197	260	232	186	246	251	346
Huelva...	66	67	130	117	102	139	87	98	192	167	179	
Jaen.....	198	130	209	125	140	167	218	126	269	285	264	425
Murcia...	272	248	371	344	232	306	321	440	520	404	497	494
Sevilla..	51	97	145	112	132	151	203	146	144	188	215	253
Toledo...	227	160	211	255	244	306	199	256	277	387	303	366
Valencia.	293	297	497	368	342	354	193	110	280	247	476	547
Others...	240	226	295	224	240	250	200	152	267	297	258	284

¹ Calculated from metric tons or metric quintals of seed cotton on the basis of one-third lint.

Source: Anuario Estadístico de la Producción Agrícola.

Table 7.--COTTON: Production¹ in Spain by Provinces, seasons beginning August 1, 1950-61

Province	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
	1,000 bales ²											
Alicante.	3	3	15	17	12	7	6	1	8	14	14	18
Badajoz..	(3)	1	2	4	7	13	21	20	20	30	31	44
Caceres..	3	3	6	8	11	20	20	29	29	36	38	49
Cadiz....	1	1	2	5	9	14	15	12	23	33	48	58
Cordoba..	(3)	9	21	16	17	41	73	44	41	77	79	121
Huelva...	(3)	(3)	1	2	2	5	4	3	2	7	7	9
Jaen.....	(3)	(3)	(3)	1	2	4	1	1	4	9	12	23
Murcia...	1	1	5	9	4	3	1	1	6	9	10	13
Sevilla..	4	7	14	14	18	36	57	38	36	56	68	119
Toledo...	1	1	2	3	4	7	6	6	5	7	8	12
Valencia.	1	2	3	6	7	12	13	15	6	1	3	5
Others...	5	8	8	7	12	13	15	6	10	13	14	16
Total..	19	36	79	91	103	168	227	162	185	292	332	487

¹ Calculated from metric tons or metric quintals of seed cotton which were converted on the basis of one-third
lent; this differs slightly from data in other tables.

² Bales of 480 pounds net.

³ Less than 500 bales.

Source: Anuario Estadistico de la Produccion Agricola.

Table 8.--COTTON: Spain, imports by countries of origin, averages 1915-19, 1925-29,
1930-34, annual 1940-62¹

Year	Argentina	Brazil	Egypt	India and Pakistan	Mexico	United States	Other countries	Total
	1,000 bales ²							
Average:								
1915-19..	1	(3)	23	0	0	358	(3)	382
1925-29..	9	(3)	31	49	0	276	8	373
1930-34..	12	(3)	69	51	0	306	7	445
Annual:								
1940.....	38	7	23	5	0	245	9	327
1941.....	113	86	26	0	0	0	5	230
1942.....	(3)	194	0	3	0	(3)	94	291
1943.....	(3)	137	0	0	0	182	70	389
1944.....	1	32	14	0	0	214	109	370
1945.....	(3)	92	5	29	0	335	48	509
1946.....	0	133	7	23	0	137	9	309
1947.....	0	114	35	100	0	3	0	252
1948 ⁴	24	236	17	57	0	29	11	374
1949.....	1	89	20	23	0	104	14	251
1950.....	26	15	48	55	0	79	18	241
1951.....	3	9	56	20	0	287	11	386
1952.....	1	34	77	36	0	139	19	306
1953.....	2	57	59	15	0	198	17	348
1954.....	0	78	44	0	0	206	2	330
1955.....	0	61	8	0	0	146	1	216
1956.....	0	29	5	0	15	174	3	226
1957.....	0	18	41	0	14	194	4	271
1958.....	0	0	48	0	28	322	60	458
1959.....	0	0	11	0	40	39	5	95
1960.....	0	38	22	0	75	191	14	340
1961.....	0	42	65	0	103	133	9	352
1962 ⁴	0	0	0	0	1	5.	0	6

¹ Calendar year data before 1948; seasons beginning August 1, thereafter.

² Bales of 480 pounds net weight.

³ Less than 500 bales.

⁴ Preliminary.

Source: Estadística del Comercio Exterior de España, and other sources.

Table 9.--Total raw cotton consumption and per capita consumption of cotton wool, and manmade fibers in Spain, 1950-60¹

Year	Total raw cotton consumption	Per capita consumption			
		Cotton	Wool	Manmade	Total
	<u>1,000 bales</u> ²	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>
1950.....	263	3.2	1.4	1.9	6.5
1951.....	388	3.6	1.3	1.9	6.8
1952.....	377	5.0	1.5	2.4	8.9
1953.....	375	5.3	1.4	2.3	9.0
1954.....	390	5.3	1.3	3.0	9.6
1955.....	415	5.9	1.4	3.6	10.9
1956.....	465	6.8	1.5	3.7	12.0
1957.....	475	7.4	1.3	3.7	12.4
1958.....	475	7.6	1.5	3.8	12.9
1959.....	550	7.6	1.3	2.9	11.8
1960.....	570	7.3	1.5	3.0	11.8

¹ Years beginning August 1 for raw cotton consumption and calendar years for per capita consumption. Data are partly estimated, as complete information is not available on consumption of raw cotton and other fibers.

² Bales of 480 pounds net weight.

Source: Food and Agriculture Organization of the United Nations and Foreign Agricultural Service.

Table 10.--Cotton yarn and cloth production and exports in Spain, 1950-62

Year ¹	Cotton yarn		Cotton cloth	
	Production	Exports	Production	Exports
	<u>Million pounds</u>	<u>Million pounds</u>	<u>Million sq. yds.</u>	<u>Million sq. yds.</u>
1950.....	127.4	0.2	444.9	0
1951.....	115.3	.1	402.5	0
1952.....	141.0	.6	492.3	0
1953.....	132.6	.4	462.8	39.9
1954.....	117.4	.3	409.9	31.2
1955.....	116.9	.5	408.3	30.1
1956.....	144.8	.1	596.8	32.9
1957.....	154.1	.4	596.3	34.6
1958.....	185.2	.6	648.8	18.5
1959.....	172.7	634.5	634.0	85.5
1960.....	187.1	22.1	653.1	252.8
1961.....	205.0	11.1	721.4	191.9
1962.....	200.1	2.4	731.4	97.7

¹ 1956 through 1962, includes small quantities of manmade fibers mixed with cotton.

Source: International Cotton Advisory Committee.

Table 11.-- Manmade fiber production in Spain, averages 1930-34, 1935-39, annual 1940-1962

Year	Cellulosic fiber			Noncellulosic fiber			Total man-made
	Yarn	Staple	Total	Yarn	Staple	Total	
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
Average:							
1930-34.....	4.2	0	4.2	0	0	0	4.2
1935-39.....	3.9	0	3.9	0	0	0	3.9
Annual:							
1940.....	6.8	0	6.8	0	0	0	6.8
1941.....	9.0	0	9.0	0	0	0	9.0
1942.....	12.2	0	12.2	0	0	0	12.2
1943.....	14.6	0	14.6	0	0	0	14.6
1944.....	16.7	1.6	18.3	0	0	0	18.3
1945.....	12.1	4.5	16.6	0	0	0	16.6
1946.....	17.7	14.8	32.5	0	0	0	32.5
1947.....	17.4	18.6	36.0	0	0	0	36.0
1948.....	15.5	20.6	36.1	0	0	0	36.1
1949.....	14.9	26.1	41.0	0	0	0	41.0
1950.....	21.9	32.1	54.0	0	0	0	54.0
1951.....	22.2	29.6	51.8	0	0	0	51.8
1952.....	25.4	44.4	69.8	0	0	0	69.8
1953.....	25.2	45.5	70.7	0	0	0	70.7
1954.....	27.3	59.6	86.9	.1	0	.1	87.0
1955.....	30.9	71.5	102.4	.4	.1	.5	102.9
1956.....	32.5	76.0	108.5	1.4	.7	2.1	110.6
1957.....	34.5	75.1	109.6	1.8	1.4	3.2	112.8
1958.....	36.5	72.2	108.7	2.1	1.2	3.3	112.0
1959.....	32.8	68.4	101.2	3.1	1.3	4.4	105.6
1960.....	34.8	84.8	119.6	3.7	2.7	6.4	126.0
1961.....	38.3	68.4	106.7	5.3	2.8	8.1	114.8
1962.....	40.9	85.4	126.3	6.8	6.3	13.1	139.4

Source: Textile Organon.

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